

Title (en)

Etch chamber having three independently controlled electrodes

Title (de)

Ätzkammer mit drei unabhängig von einander gesteuerten Elektroden

Title (fr)

Chambre de gravure comportant trois électrodes indépendamment contrôlées

Publication

**EP 0840348 A1 19980506 (EN)**

Application

**EP 96117636 A 19961104**

Priority

EP 96117636 A 19961104

Abstract (en)

An etch chamber for anisotropic and selective etching of a semiconductor wafer contains a dielectric window (34) and an externally located first electrode member (36) adjacent to the dielectric window for generating a plasma within the chamber. A second electrode member (42) is located within the chamber for exciting the plasma generated by the first electrode member. A third electrode (48) is located between the first electrode member and the dielectric window for sputtering the dielectric window to provide sidewall passivation for anisotropic and selective etching of a semiconductor wafer located within said chamber. Each electrode member is powered by its own separate RF generator. This arrangement enables the independent control of each of the three electrode members to optimize the etching of the semiconductor wafer located within the chamber.

<IMAGE>

IPC 1-7

**H01J 37/32**

IPC 8 full level

**H01J 37/32** (2006.01)

CPC (source: EP)

**H01J 37/321** (2013.01); **H01J 2237/3345** (2013.01); **H01J 2237/3346** (2013.01)

Citation (search report)

- [A] EP 0650183 A1 19950426 - APPLIED MATERIALS INC [US]
- [A] US 5468296 A 19951121 - PATRICK ROGER [US], et al
- [E] US 5597438 A 19970128 - GREWAL VIRINDER S [US], et al

Cited by

DE19955671A1; DE19955671B4

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**EP 0840348 A1 19980506**; **EP 0840348 B1 20030514**; DE 69628170 D1 20030618; DE 69628170 T2 20040408

DOCDB simple family (application)

**EP 96117636 A 19961104**; DE 69628170 T 19961104